

ABSTRACT OF THE DISCLOSURE

The invention provides a hydrogen permeable membrane which has an excellent high-temperature amorphous stability and a long lifetime under high-temperature heating operation and which can be miniaturized for use in a high-performance hydrogen purifier.

The hydrogen permeable membrane is made of a non-crystalline nickel-zirconium alloy or zirconium-nickel alloy composed of 44 to 75 atom % of nickel or zirconium; and 0.2 to 16 atom % of aluminum, 0.2 to 12 atom % of vanadium and/or niobium, or 0.2 to 12 atom % of niobium and 0.1 to 10 atom % of phosphorus (provided that the combined amount of niobium and phosphorus is not more than 18 atom %); with the balance being zirconium or nickel and unavoidable impurities.